

CLAIMS

What is claimed is:

1. An apparatus to aid the loading and unloading of flexographic plates to and from an imager, comprising:
 - a magazine containing a plurality of compartments each for holding a single flexographic plate, the compartments arranged vertically, and movable in a vertical direction, each respective compartment having a respective rest vertical position at a rest horizontal position, each respective compartment further having a loading vertical position at which the respective compartment is at a height for loading onto the imager;
 - a lifting mechanism to lift and lower the compartments; and
 - a control system to control the lifting and lowering by the lifting mechanism,such that a particular compartment is moved from its rest vertical position at a rest horizontal position to a loading vertical position at which the particular compartment is at a height for loading onto the imager or unloading from the imager.
2. An apparatus as recited in claim 1, wherein each compartment, when at its loading vertical position, is movable horizontally from and to the rest horizontal position to and from a loading horizontal position suitable for loading and unloading the plate on the compartment onto and from the imager.
3. An apparatus as recited in claim 1, wherein the lifting mechanism is operative to lift and lower the magazine of compartments, and wherein the control system controls the lifting and lowering of the magazine until a selected one of the compartments is at its loading vertical position.
4. An apparatus as recited in claim 1, wherein the lifting mechanism is operative to lift and lower the compartments of the magazine one compartment at a time.

5. An apparatus as recited in claim 4, wherein the respective rest positions of each of the compartments are lower than the loading vertical position such that a particular compartment pre-loaded with a plate is lifted from its rest vertical position to the loading vertical position, then moved while at the loading vertical position to the loading horizontal position for loading onto the imager.
6. An apparatus as recited in claim 1, wherein the lifting mechanism is further operative to lift or lower the particular compartments from the loading vertical position after the plate is imaged and unloaded from the imager to the particular compartment's respective imaged vertical position.
7. An apparatus as recited in claim 1, wherein the compartments are pre-loaded with pre-sensitized CTP flexographic plates such that as a result of the pre-loading, the particular plate is in the compartment without a cover sheet.
8. An apparatus as recited in claim 1, wherein the magazine is transportable from a storage location to an imaging location adjacent to the imager.
9. An apparatus as recited in claim 1, wherein the magazine comprises at least 10 compartments.
10. A method of loading a flexographic plate to an imager, the method comprising:
 - (a) pre-loading a particular flexographic plate into a particular compartment of a magazine containing a plurality of compartments each for holding a single flexographic plate, the compartments arranged vertically, and movable in a vertical direction, each respective compartment having a respective rest vertical position at a rest horizontal position, each respective compartment further having a loading vertical position at which the respective compartment is at a height for loading onto the imager or unloading from the imager; and
 - (b) lifting or lowering the particular compartment from its rest vertical position at its rest horizontal position to its loading vertical position, such that the particular flexographic plate can be loaded onto the imager.

11. A method as recited in claim 10, further comprising:
 - (c) moving the particular compartment when at its loading vertical position from and to its rest horizontal position to and from a loading horizontal position suitable for loading and unloading the plate on the compartment onto and from the imager.
12. A method as recited in claim 10, wherein step (b) includes lifting or lowering the magazine of compartments until the particular compartments of the particular flexographic plate at its loading vertical position.
13. A method as recited in claim 10, wherein step (b) includes lifting or lowering only the particular compartment of the magazine on the basis of one compartment being lifted or lowered at a time.
14. A method as recited in claim 13, wherein the respective rest positions of each of the compartments are lower than the loading vertical position such that step (b) includes lifting the pre-loaded particular compartment from its rest vertical position to the loading vertical position, then moving the particular compartment while at the loading vertical position to the loading horizontal position for loading the plate onto the imager.
15. A method as recited in claim 10, further comprising:
 - lifting or lowering the particular compartment from the loading vertical position after the plate is imaged and unloaded from the imager to an imaged vertical position for the particular compartment.
16. A method as recited in claim 10, wherein step (a) includes pre-loading the particular compartment with a pre-sensitized CTP flexographic plate such that as a result of the pre-loading, the particular plate is in the compartment without a cover sheet.
17. A method as recited in claim 10, further comprising transporting the magazine from a storage location to an imaging location adjacent to the imager.
18. A method as recited in claim 10, wherein the magazine comprises at least 10 compartments.

19. A method as recited in claim 10, wherein step (b) is carried out under a computerized control system.